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Commercial Fire Operations: Searching for Fire and Life with Guide Ropes

SUMMARY

Fire departments should ensure that firefighters employ guide ropes securely attached to permanent objects at entry portals when conducting interior operations at fires in large commercial buildings. Firefighters operating without a guide rope could become disoriented and lost at fires in large, open or complex occupancies.

DESCRIPTION

On the evening of December 3, 1999, Worcester, Massachusetts Fire Department units responded to reports of smoke from the roof of a cold storage warehouse. The fire building was a 6-story, vacant brick structure, commonly used by squatters. First arriving companies saw heavy smoke; the Incident Commander received reports that homeless inhabitants were possibly trapped in the building. First alarm companies entered the structure to search for life and the seat of the fire. The building's complex layout—94,000 square feet and no windows—complicated search efforts. Members operating without a hoseline did not employ guide ropes or tag lines.

While conducting a search on upper floors, two members became disoriented on the fifth floor and exhausted their self-contained breathing apparatus (SCBA) air supply. Personnel from additional alarms were assigned to search for the lost members. Two additional teams of paired firefighters proceeded to the fifth floor, but they also became disoriented and were unable to exit the fire building. In total, six firefighters (three separate pairs) became disoriented while conducting searches for life, fire, or other firefighters in the warehouse. All six of the members exhausted their SCBA supply and died from smoke inhalation or thermal injuries. None of the members employed guide ropes during the search operations.

Firefighters operating in large, open, or complex commercial buildings should use guide ropes when searching for fire and life. A guide rope, securely attached to a permanent object outside the building, provides personnel a valuable aide in safely exiting the building, particularly in the absence of a hoseline. Furthermore, the guide rope provides rapid intervention team personnel a means of quickly locating injured, lost or missing firefighters.

CITATION

National Institute for Occupational Safety and Health. *Firefighter Fatality Investigation Report 99-47: Six Career Firefighters Killed in Cold-Storage and Warehouse Building Fire—Massachusetts*. September 27, 2000.

https://www.llis.dhs.gov/member/secure/detail.cfm?content_id=13593

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